

Chemistry I: Chemical Symbols Nomenclature

All elements have a symbol. This symbol is basically chemical shorthand.

The rules for writing the plain symbol for all elements are as follows;

1. All single letter symbols are always capitalized.
2. The first letter of a double letter symbol is always capitalized followed by the second letter in lower case.

The **symbol for neutral atoms** of elements will look like this:

Na

H

The **symbol for monatomic ions** (single atoms of elements with charges) will look like this:

Fe^{+3}

S^{-2}

The **symbol for polyatomic ions** (groups of bonded atoms with charges) will look like this:

NO_3^{-1}

SO_4^{-2}

The **isotopic symbol** consists of three parts: the symbol of the element, the atomic number of the element, and the mass number of that specific isotope. The atomic number and the symbol letters must agree with the periodic table! Here are some examples of an isotopic symbol:

$^{238}_{92}\text{U}$

$^{235}_{92}\text{U}$

The **abbreviated isotopic symbol** consists of the element symbol then a dash followed by the mass number.

U-235

U-238